ACHIEVE YOUR PET DIABETES MANAGEMENT GOALS

Empower your clients with the tools they need to effectively manage pet diabetes with Caninsulin and VetPen.

Quick Links:
- VetPen
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- Support and resources

References
Product insert
For more than 20 years, Caninsulin has been trusted by veterinarians as a first-line treatment for pet diabetes.

A 2013 survey of more than 800 veterinarians* found that:

- Veterinarians give Caninsulin an 8.4 out of 10 satisfaction rating¹
- Caninsulin is used in 82% of diabetic dogs and 71% of diabetic cats, making it the most popular insulin for pet diabetes in Europe¹

Now you can get even more value from Caninsulin with VetPen®.

- Veterinarians find VetPen easy, accurate, and less frightening for clients¹
- 84% of prescribing veterinarians are satisfied with VetPen¹

* Respondents were from the UK, France, Germany, and Italy.
Caninsulin is the only insulin approved for both dogs and cats.

- Porcine insulin has been proven to be efficacious in both dogs and cats in published studies²–⁵
- While anti-insulin antibodies can be a concern in dogs, Caninsulin minimizes this risk because porcine insulin has an identical amino acid sequence to canine insulin
- Although anti-insulin antibodies do not appear to be a concern in cats, the porcine insulin in Caninsulin only differs from the feline insulin sequence by 3 amino acids—that’s the closest match of all available insulin products

Caninsulin can be dosed more accurately than higher concentration insulin.

- The 40 IU/mL concentration of Caninsulin allows for more accurate dose measurement, especially at low doses
- VetPen® provides added accuracy over U-40 syringes for doses of 8 IU or less

Administer Caninsulin using U-40 syringes or ergonomically designed VetPen.
CANINSULIN IS A PROVEN, RELIABLE TREATMENT CHOICE.

Specifically formulated for both a rapid onset and sustained effect.

Caninsulin consists of:
- **35%** amorphous insulin fraction for rapid blood glucose–lowering effects
- **65%** crystalline zinc insulin fraction for sustained effects

Manage your diabetic cases with 1 or 2 doses per day.
- Most dogs\(^2,3\) and all cats\(^4-6\) require twice-daily dosing

1 IN 3 DOGS may be adequately regulated with once-daily dosing\(^2,3\)
CANINSULIN EFFECTIVELY REGULATES BLOOD GLUCOSE IN BOTH DOGS AND CATS.

Improvement may be seen in dogs\(^2\) and cats\(^4,5\) within a few days of starting treatment
- Owners will soon notice that their pet is feeling better
- Veterinarians can confirm a rapid resolution of clinical signs in response to insulin

Clinical remission is possible in cats
- Rates were between 28% and 56%\(^5,7,\)\(^*\) in prospective studies where diet was not controlled
- Rates were similar to human insulin analog treatment\(^7\)

\(^*\) Clinical remission may occur when insulin treatment is started early and a low-carbohydrate diet is fed.

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![Mean Blood Glucose Levels in Dogs and Cats Treated with Caninsulin](image-url)

Blood glucose (mmol/L)

- Dogs
- Cats
- Average

Data adapted from Monroe et al\(^2\) and Brianceau et al.\(^6\)

†Blood glucose should ideally be between 5 mmol/L and 12 mmol/L in dogs and 16 mmol/L in cats.
CANINSULIN HELPS ACHIEVE DIABETES MANAGEMENT GOALS.

Dogs showed improvement within a few weeks.

- **94%** reduction in polyuria\(^2\)
- **96%** reduction in polydipsia\(^2\)

Cats showed improvement within a few weeks.

- **86%** of cats experienced a resolution or improvement of polydipsia and polyuria\(^5\)
AIM FOR SUCCESS WITH VETPEN®—
THE NEW ADMINISTRATION OPTION WITH ENHANCED ACCURACY.

Enables owners to give more accurate doses consistently.

**Easy dosing.**
- Precision instrumentation allows the same dose to be chosen every time by simply turning a dial

**Fewer errors.**
- Accuracy is not reliant on a client’s ability to draw up the dose with a syringe

**Offers improved accuracy over syringes for doses under 8 IU.**
- When doses were drawn up by trained laboratory technicians, U-40 syringes were found to deliver at least 20% to 25% more insulin than needed for a 1-unit dose
- VetPen enables doses to be delivered with accuracy and precision down to 0.5 units

Syringes may OVERDELIVER INSULIN by 25%
AIM FOR SUCCESS WITH VETPEN®—
THE NEW ADMINISTRATION OPTION THAT REMAINS ACCURATE AND PRECISE WITH REGULAR USE.

In a controlled study, VetPen showed little to no change in accuracy or precision after: 8

- 3,000 injections
- Being dropped gently 3 different ways:
  1. Cap end down  2. Cap end up  3. Horizontally
- Exposure to cool atmosphere (2°C–8°C)
- Exposure to hot atmosphere (40°C/50% relative humidity for 4 hours)

Precise dosing limits variability in the dose delivered. 8

- VetPen may help to further improve regulation of diabetic dogs and cats 9,10

VetPen stands up to the challenges of extended use.

**ACCURACY:**
How close you are to the true value

**PRECISION:**
The ability to reproduce or repeat that accuracy
AIM FOR SUCCESS WITH VETPEN®—
THE NEW ADMINISTRATION OPTION DESIGNED WITH YOUR CLIENTS IN MIND.

Less intimidating for pet owners who are nervous about injections.
- Helps alleviate the fears and concerns clients may have using U-40 insulin syringes

Easy to handle and prepare.
- More than 97% of pet owners reported having no difficulty learning how to use VetPen\(^9,10\)
- Ergonomically designed with add-ons to make administration even easier for clients with visual impairments or manual dexterity issues

A portable alternative to ordinary syringes and vials.
- Allows clients to give their pets injections discreetly almost anywhere

Reduced discomfort for dogs and cats.
- Specially lubricated and triple-sharpened needles lessen the penetration force and discomfort for the pet

\(^{42}\) of VetPen users with diabetic cats reported that their pets’ response to injections improved when injections were given using VetPen instead of U-40 syringes.\(^9\)
DIFFERENT PRESENTATIONS TO FIT DIFFERENT PETS’ NEEDS.

Multi-dose vials.
- 10 mL
- 2.5 mL (carton of 10)

Syringes.
- U-40 syringes
  - 1 mL syringes
  - 0.5 mL syringes

Multi-dose cartridges.
- 2.7 mL (carton of 10)

The VetPen starter kit.
Provides clients with:
- 8 IU or 16 IU reusable insulin pen
- Detailed instructions
- Needles
- Needle remover
- Adaptors for the dose selector and release button
- Handy travel pouch

VARIABLE OPTIONS AVAILABLE
to best meet the need of the pet and minimize waste.
EXTENSIVE SUPPORT AND RESOURCES TO INCREASE SUCCESS.

Support for you.
- Access to MSD Animal Health diabetes professionals and helpful tools
- **BENEFIT:** Get help dealing with the challenges of pet diabetes management

Support for your staff.
- Online training and technical support to boost their knowledge of pet diabetes
- **BENEFIT:** Improved knowledge makes better communication, which leads to better client relationships

Tools to help your clients.
- Pet owner educational materials to make administration and monitoring easier
- **BENEFIT:** Educating and supporting your clients leads to better compliance

See available support materials on Caninsulin.com
WHY CANINSULIN?

<table>
<thead>
<tr>
<th>Feature</th>
<th>Caninsulin</th>
</tr>
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<tbody>
<tr>
<td>Approved for veterinary use</td>
<td>✓</td>
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<tr>
<td>Approved for use in both dogs and cats</td>
<td>✓</td>
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<tr>
<td>Once- or twice-daily dosing(^2-7,9,10)</td>
<td>✓</td>
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<tr>
<td>Proven efficacy confirmed in numerous published studies(^3-10)</td>
<td>✓</td>
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<tr>
<td>Pet-friendly 40 IU/mL concentration</td>
<td>✓</td>
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<tr>
<td>Multiple presentations to suit all shapes and sizes and minimize waste</td>
<td>✓</td>
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<tr>
<td>Ensured precision and enhanced accuracy through VetPen(^\circ)</td>
<td>✓</td>
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<tr>
<td>Technical support from diabetes professionals and client education tools from MSD Animal Health</td>
<td>✓</td>
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ONCE PETS ARE REGULATED, the cost of these invaluable benefits to pet owners can be as little as a daily cup of coffee.


Caninsulin is an aqueous suspension of insulin containing 40 IU per ml of highly purified porcine insulin, 30% is amorphous zinc insulin and 70% crystalline zinc insulin.

USES
Caninsulin, an intermediate acting insulin containing porcine insulin, is structurally identical to canine insulin. It is indicated in the treatment of diabetes mellitus in dogs and cats.

DOSAGE AND ADMINISTRATION
Invert the insulin vial a few times to resuspend the Caninsulin. Caninsulin should be administered by subcutaneous injection. An insulin syringe with unit markings for a 40 IU/ml insulin should be used.

A once daily injection is sufficient to stabilise the blood glucose level in many dogs. However, the duration of action may vary, making it necessary to administer insulin twice daily to some dogs. In cats, it is necessary to administer Caninsulin twice daily.

The dose depends on the degree of deficit in the animal’s own insulin production and therefore is different in each case. In dogs, the initial daily dose is 1 IU per kg bodyweight plus a body weight dependent supplement dose. In cats, the initial daily dose is 0.25-0.5 IU/kg twice daily. Especially in obese cats, an unduly high starting dose may be dangerous.

Subsequent adjustment to establish the maintenance dose should be made by increasing or decreasing the daily dose by approximately 10% per day according to the results of measurement of the blood glucose concentrations.

Once the maintenance dose has been established and the animal is stabilised a long term management programme needs to be implemented. The aim should be to manage the animal in such a way as to minimise the variations in its insulin requirement. This includes monitoring to detect under or overdosage of insulin and adjustment of dose if required. Careful stabilisation and tight monitoring and control during maintenance will help to limit the chronic problems associated with diabetes, such as cataracts.

Various approaches to maintenance have been described. The most clinically rational approach is for the owner to monitor and record the animal’s general health and urine ketones (including well-being, thirst and appetite) and check urine glucose at least daily. The veterinary surgeon checks the case every 2-4 months (or more often if there are problems) including its health and urine glucose and ketones record. Blood glucose is also measured at this time. Adjustments to the insulin dose are made by the veterinarian based on full analysis of the clinical data and on blood glucose measurement.

The ability for owners to recognise the signs of hypo- or hyperglycaemia and respond appropriately is important if control is to be achieved during maintenance therapy. Polyuria, polydipsia and polyphagia in combination with weight loss, general bad condition, and lethargy are the most common clinical signs of diabetes mellitus and require administration of insulin to restore blood glucose concentrations to the normal range.

CONTRAINDICATIONS, WARNINGS, ETC.
1. Caninsulin is an intermediate acting insulin and is not intended for the treatment of animals with severe acute diabetes presenting in a ketoacidotic state. Caninsulin must not be administered by the intravenous route.

2. The use of progestogens in patients suffering from diabetes mellitus should be avoided. Ovari-(ohyster)ectomy may have to be considered.
3. Stress and irregular exercise must be avoided. Care must be taken with the use of corticosteroids.
4. It is important to establish a strict feeding schedule with minimal fluctuations and changes in consultation with the owner.
5. Administration of Caninsulin must be carried out by an adult responsible for the welfare of the animal.

For animal treatment only. Keep out of the reach of children.

STORAGE
Store refrigerated at 2-8°C. Do not freeze. Protect from light. Store in an upright position. Following withdrawal of the first dose use the product within 20 days. Discard unused material.

PACKAGING
Vials containing 10 ml or 2.5 ml in single and multiple packs.